FIG.1

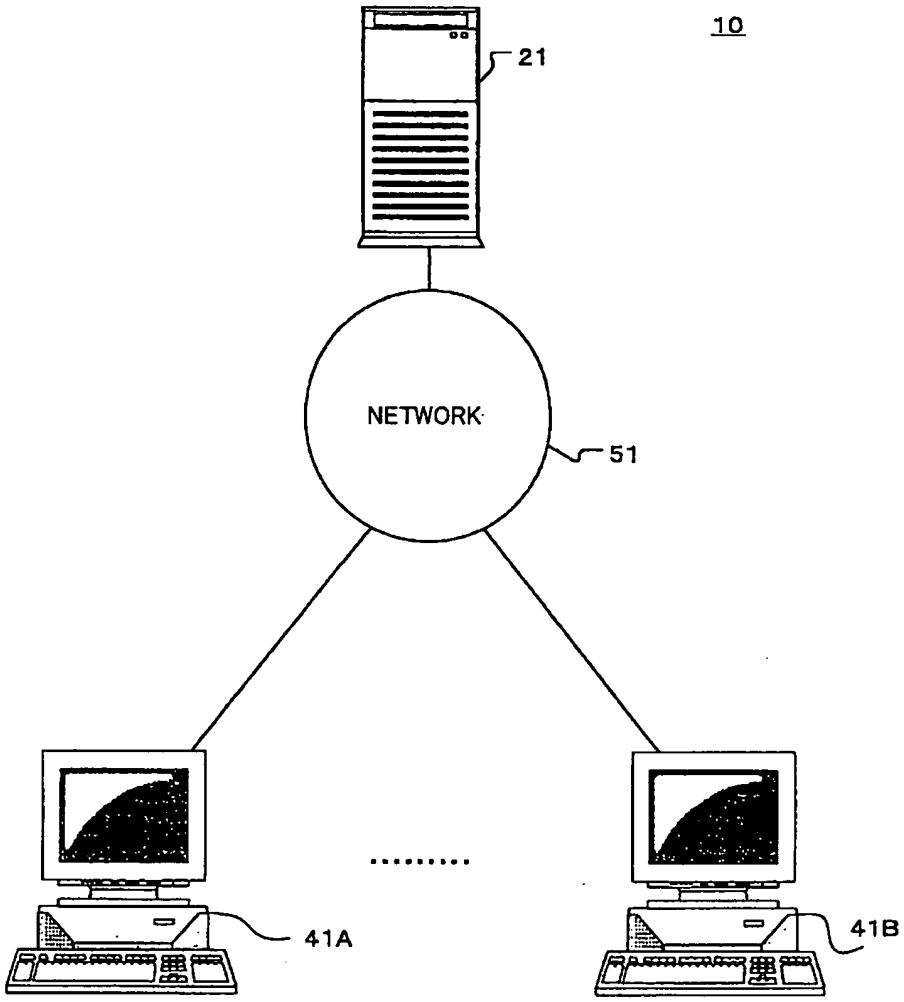


FIG. 2

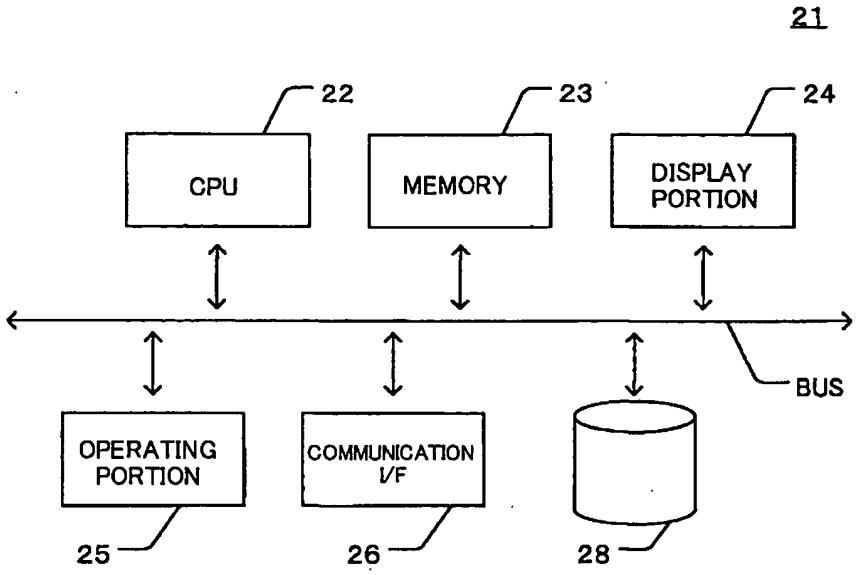

21
22
23
24
CPU
MEMORY
DISPLAY PORTION
BUS
OPERATING PORTION
COMMUNICATION I/F
25
26
28

FIG. 3

PERSONAL INFORMATION DATABASE

ID	NAME	PASSWORD	ADDRESS	TELEPHONE NUMBER	E-MAIL	CLASSIFICATION INFORMATION	BILLING END INFORMATION	...
ID1	NAME 1	PASSWORD 1	ADDRESS 1	TELEPHONE NUMBER 1	E-MAIL 1	CLASSIFICATION INFORMATION 1	BILLING END INFORMATION 1	...
ID2	NAME 2	PASSWORD 2	ADDRESS 2	TELEPHONE NUMBER 2	E-MAIL 2	CLASSIFICATION INFORMATION 2	BILLING END INFORMATION 2	...
ID3	NAME 3	PASSWORD 3	ADDRESS 3	TELEPHONE NUMBER 3	E-MAIL 3	CLASSIFICATION INFORMATION 3	BILLING END INFORMATION 3	...
ID4	NAME 4	PASSWORD 4	ADDRESS 4	TELEPHONE NUMBER 4	E-MAIL 4	CLASSIFICATION INFORMATION 4	BILLING END INFORMATION 4	...
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	...

FIG. 4

LEARNING INFORMATION DATABASE

CLASS	ITEM	CLASSIFICATION	LEARNING INFORMATION	...
CLASS 1	LEARNING ITEM 1	CLASSIFICATION 1	LEARNING INFORMATION 1	...
		CLASSIFICATION 1	LEARNING INFORMATION 2	...
		...	...	...
		...	...	...
	...	...	...	...
...	...	...	...	

FIG. 5

LEARNING HISTORY INFORMATION DATABASE

ID	DATE AND TIME	CLASS	ITEM	LEARNING INFORMATION	LEARNING PROCESS INFORMATION	LEARNING RESULT INFORMATION	QUESTION AND ANSWER ORDER INFORMATION	QUESTION AND ANSWER TIME INFORMATION	...
ID1	DATE AND TIME 1	CLASS 1	ITEM 1	LEARNING INFORMATION 1	LEARNING PROCESS INFORMATION 1	LEARNING RESULT INFORMATION 1	QUESTION AND ANSWER ORDER INFORMATION 1	QUESTION AND ANSWER TIME INFORMATION 1	...
ID1	DATE AND TIME 2	CLASS 1	ITEM 2	LEARNING INFORMATION 2	LEARNING PROCESS INFORMATION 2	LEARNING RESULT INFORMATION 2	QUESTION AND ANSWER ORDER INFORMATION 2	QUESTION AND ANSWER TIME INFORMATION 2	...
ID1	DATE AND TIME 3	CLASS 1	ITEM 3	LEARNING INFORMATION 3	LEARNING PROCESS INFORMATION 3	LEARNING RESULT INFORMATION 3	QUESTION AND ANSWER ORDER INFORMATION 3	QUESTION AND ANSWER TIME INFORMATION 3	...
ID1	DATE AND TIME 4	CLASS 1	ITEM 4	LEARNING INFORMATION 4	LEARNING PROCESS INFORMATION 4	LEARNING RESULT INFORMATION 4	QUESTION AND ANSWER ORDER INFORMATION 4	QUESTION AND ANSWER TIME INFORMATION 4	...
ID2	DATE AND TIME 4	CLASS 8	ITEM 1	LEARNING INFORMATION 5	LEARNING PROCESS INFORMATION 5	LEARNING RESULT INFORMATION 5	QUESTION AND ANSWER ORDER INFORMATION 5	QUESTION AND ANSWER TIME INFORMATION 5	...
.	.	.	.	.	.	.	.	.	
.	.	.	.	.	.	.	.	.	...
.	.	.	.	.	.	.	.	.	

FIG. 6

BILLING INFORMATION DATABASE

BILLING END INFORMATION	ID	BILLING INFORMATION	...
BILLING END INFORMATION 1	ID1	BILLING INFORMATION 1	...
BILLING END INFORMATION 2	ID2	BILLING INFORMATION 2	...
BILLING END INFORMATION 3	ID3	BILLING INFORMATION 3	...
BILLING END INFORMATION 4	ID4	BILLING INFORMATION 4	...
. . .	. . .	. . .	...

FIG. 7

QUESTION INFORMATION DATABASE

CLASS	CLASSIFICATION	ITEM	POSITIONAL INFORMATION	...
QUESTION INFORMATION 1	ANSWER CLASSIFICATION 1	ITEM 1	POSITIONAL INFORMATION 1	...
		ITEM 2	POSITIONAL INFORMATION 2	...
		ITEM 3	POSITIONAL INFORMATION 3	...
		ITEM 4	POSITIONAL INFORMATION 4	...
QUESTION INFORMATION 2	ANSWER CLASSIFICATION 2	ITEM 5	POSITIONAL INFORMATION 5	...
QUESTION INFORMATION 3	ANSWER CLASSIFICATION 3	ITEM 6	POSITIONAL INFORMATION 6	...
		.	.	...
.	.	.	.	...
.	.	.	.	
.	.	.	.	

FIG. 8

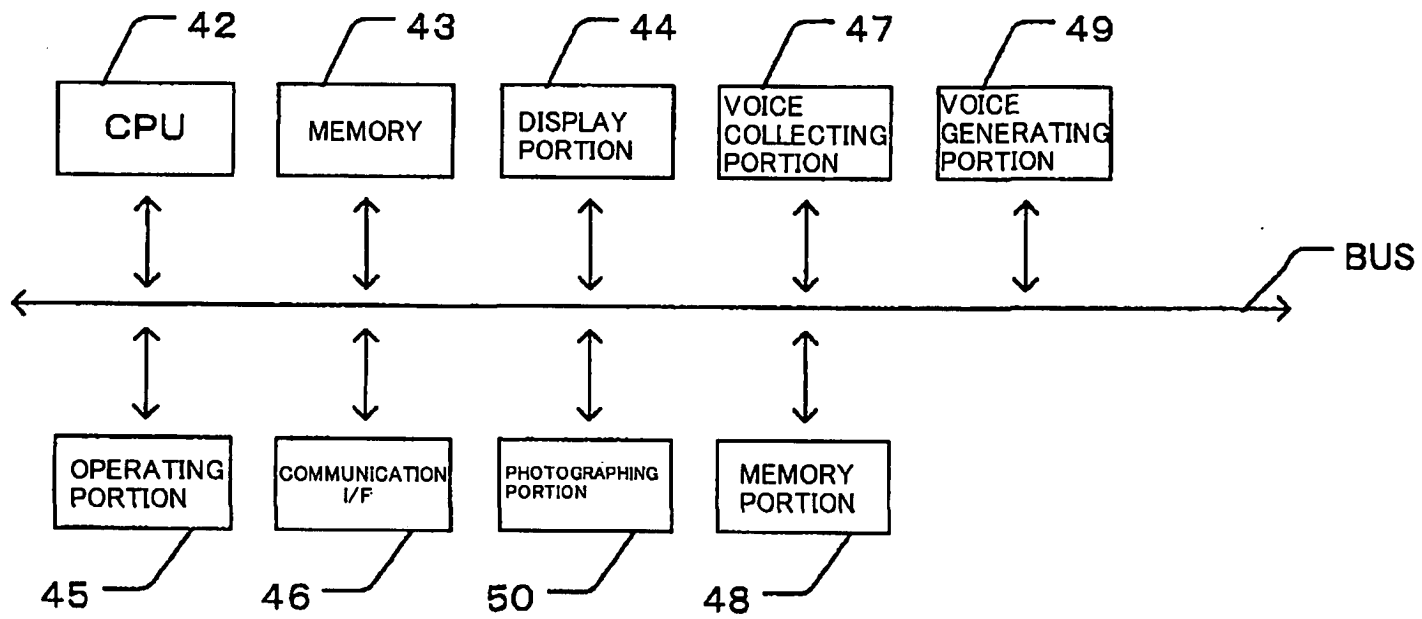

42
43
44
47
49
CPU
MEMORY
DISPLAY PORTION
VOICE COLLECTING PORTION
VOICE GENERATING PORTION
BUS
OPERATING PORTION
COMMUNICATION I/F
PHOTOGRAPHING PORTION
MEMORY PORTION
45
46
50
48

FIG. 9

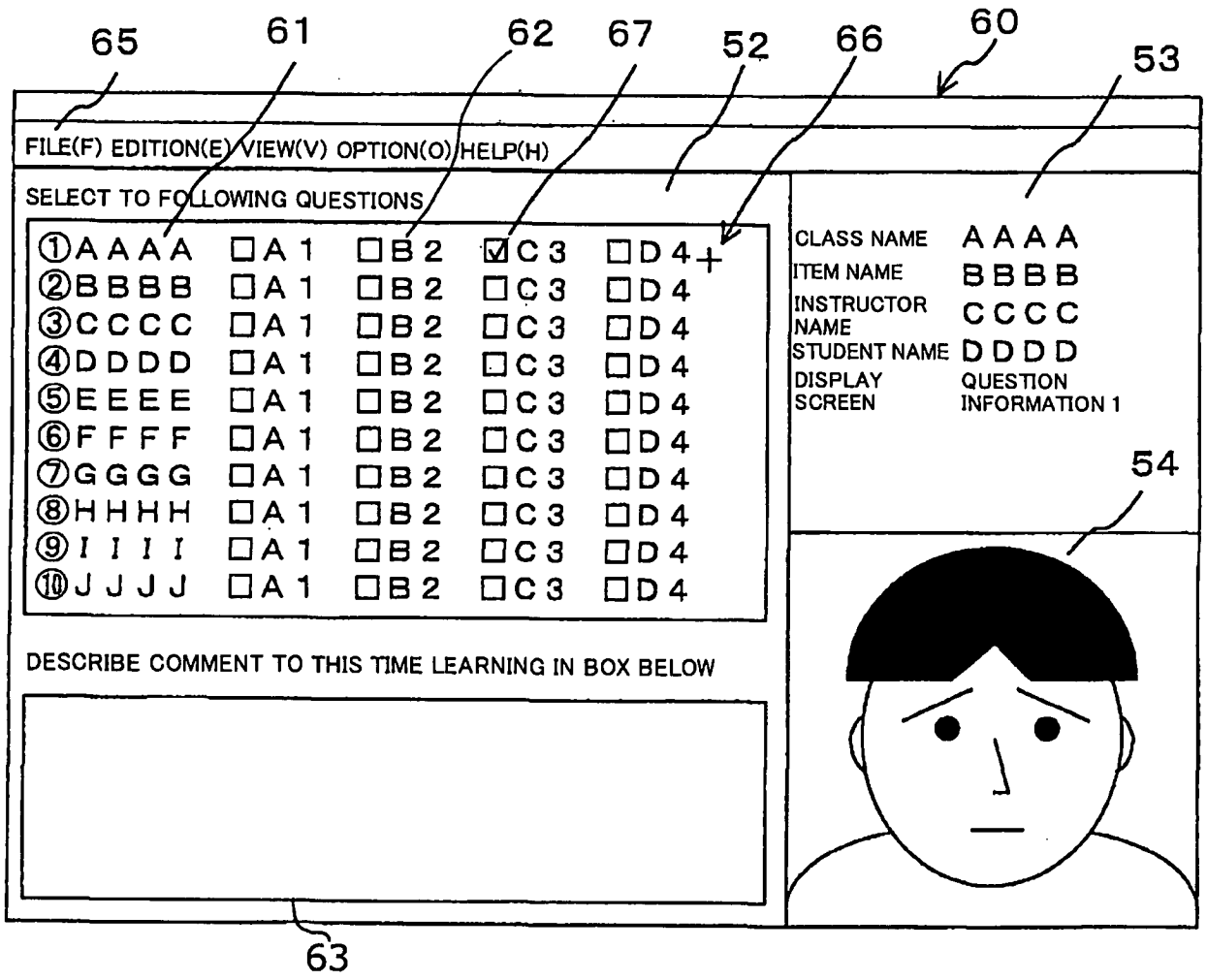

65
61
62
67
52
66
60
53
FILE(F) EDITION(E) VIEW(V) OPTION(O) HELP(H)
SELECT TO FOLLOWING QUESTIONS
①A A A A ☐A 1 ☐B 2 ☑C 3 ☐D 4
②B B B B ☐A 1 ☐B 2 ☐C 3 ☐D 4
③C C C C ☐A 1 ☐B 2 ☐C 3 ☐D 4
④D D D D ☐A 1 ☐B 2 ☐C 3 ☐D 4
⑤E E E E ☐A 1 ☐B 2 ☐C 3 ☐D 4
⑥F F F F ☐A 1 ☐B 2 ☐C 3 ☐D 4
⑦G G G G ☐A 1 ☐B 2 ☐C 3 ☐D 4
⑧H H H H ☐A 1 ☐B 2 ☐C 3 ☐D 4
⑨I I I I ☐A 1 ☐B 2 ☐C 3 ☐D 4
⑩J J J J ☐A 1 ☐B 2 ☐C 3 ☐D 4
DESCRIBE COMMENT TO THIS TIME LEARNING IN BOX BELOW
CLASS NAME A A A A
ITEM NAME B B B B
INSTRUCTOR NAME C C C C
STUDENT NAME D D D D
DISPLAY SCREEN QUESTION INFORMATION 1
54
63

FIG. 10

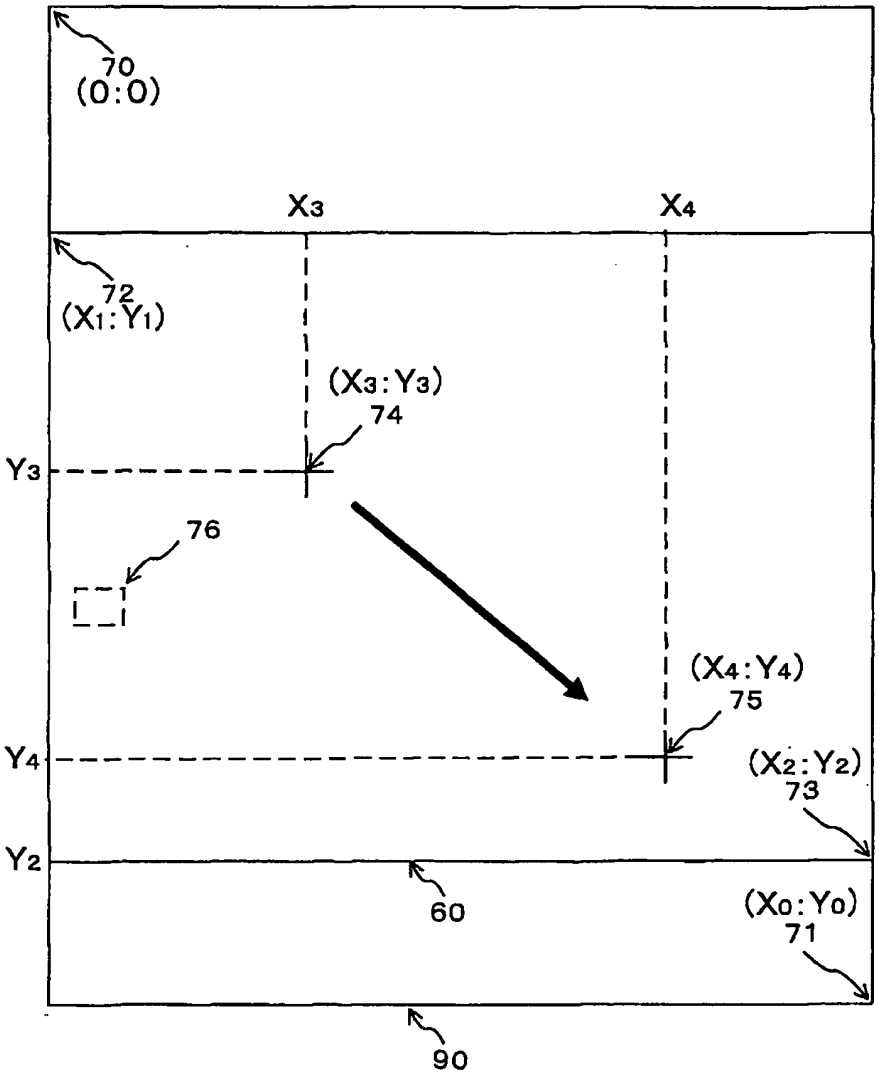

70
(0:0)
X3
X4
72
(X1:Y1)
(X3:Y3)
74
Y3
76
(X4:Y4)
75
Y4
(X2:Y2)
73
Y2
60
(X0:Y0)
71
90

FIG. 11

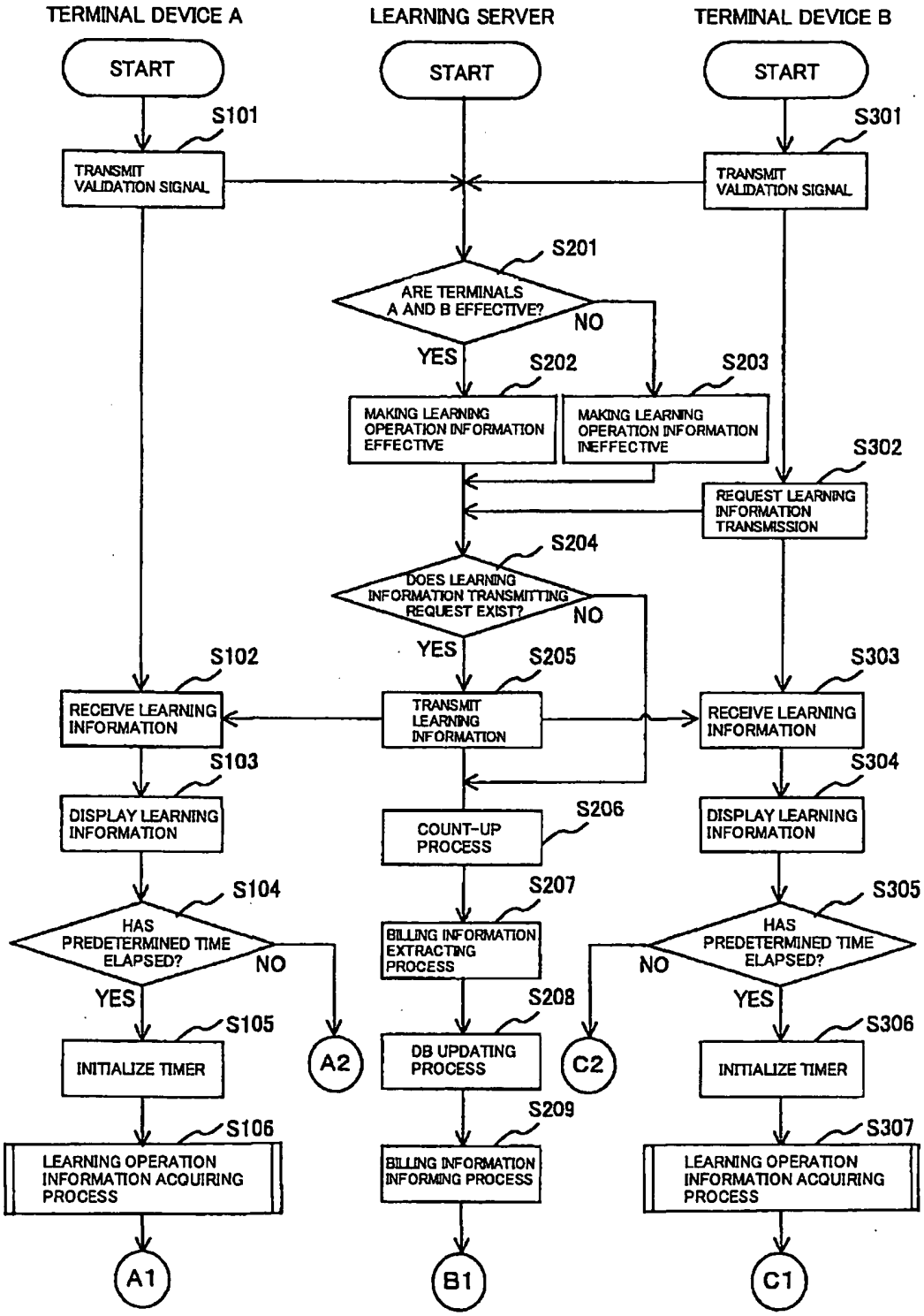

TERMINAL DEVICE A
LEARNING SERVER
TERMINAL DEVICE B
START
START
START
S101
S301
TRANSMIT VALIDATION SIGNAL
TRANSMIT VALIDATION SIGNAL
S201
ARE TERMINALS A AND B EFFECTIVE?
NO
YES
S202
S203
MAKING LEARNING OPERATION INFORMATION EFFECTIVE
MAKING LEARNING OPERATION INFORMATION INEFFECTIVE
S302
REQUEST LEARNING INFORMATION TRANSMISSION
S204
DOES LEARNING INFORMATION TRANSMITTING REQUEST EXIST?
NO
YES
S102
S205
S303
RECEIVE LEARNING INFORMATION
TRANSMIT LEARNING INFORMATION
RECEIVE LEARNING INFORMATION
S103
S304
DISPLAY LEARNING INFORMATION
DISPLAY LEARNING INFORMATION
S206
COUNT-UP PROCESS
S104
S207
S305
HAS PREDETERMINED TIME ELAPSED?
NO
YES
BILLING INFORMATION EXTRACTING PROCESS
HAS PREDETERMINED TIME ELAPSED?
NO
YES
S105
S208
S306
INITIALIZE TIMER
A2
DB UPDATING PROCESS
C2
INITIALIZE TIMER
S106
S209
S307
LEARNING OPERATION INFORMATION ACQUIRING PROCESS
BILLING INFORMATION INFORMING PROCESS
LEARNING OPERATION INFORMATION ACQUIRING PROCESS
A1
B1
C1

FIG. 12

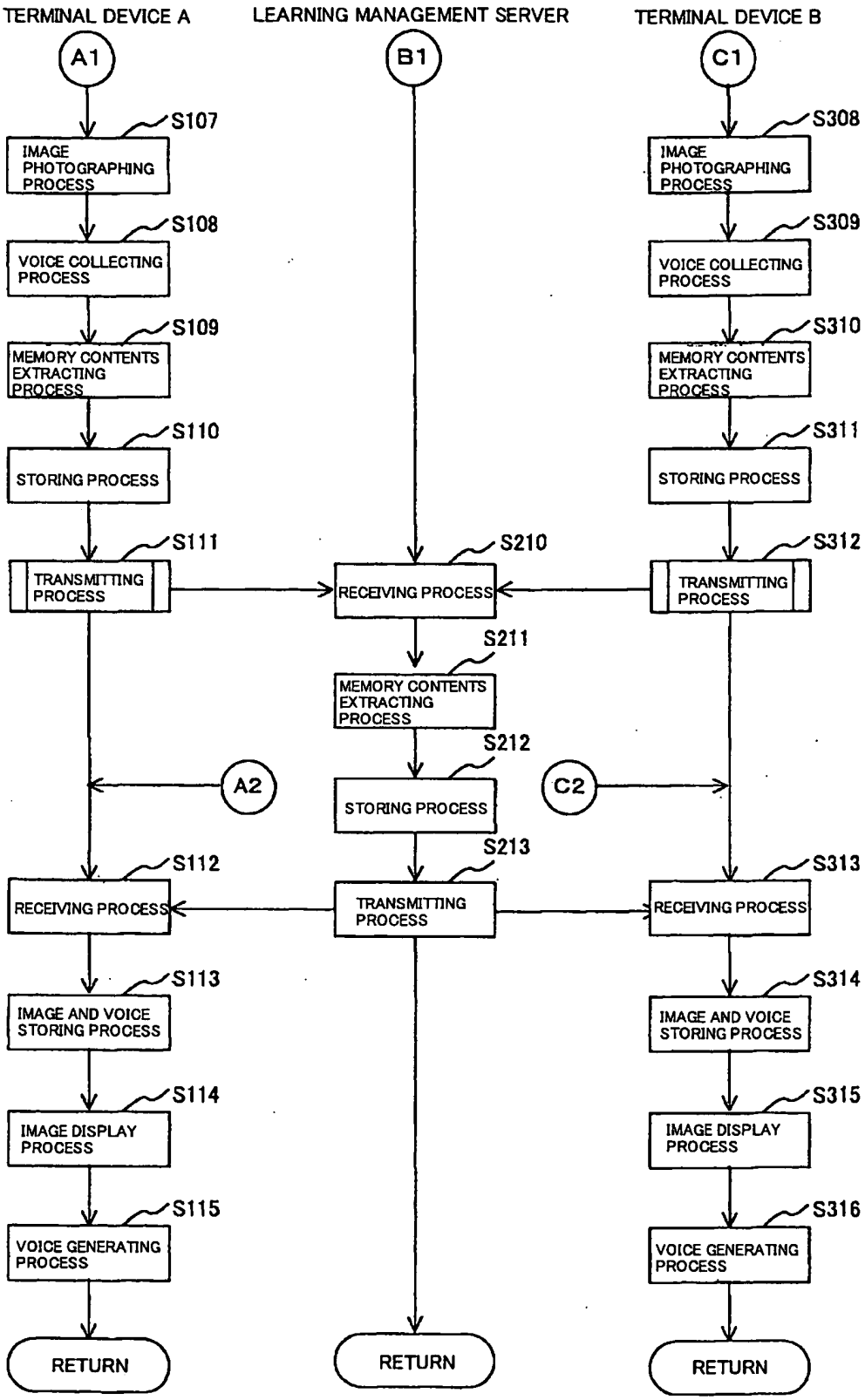

TERMINAL DEVICE A
LEARNING MANAGEMENT SERVER
TERMINAL DEVICE B
A1
B1
C1
S107
IMAGE PHOTOGRAPHING PROCESS
S308
IMAGE PHOTOGRAPHING PROCESS
S108
VOICE COLLECTING PROCESS
S309
VOICE COLLECTING PROCESS
S109
MEMORY CONTENTS EXTRACTING PROCESS
S310
MEMORY CONTENTS EXTRACTING PROCESS
S110
STORING PROCESS
S311
STORING PROCESS
S111
TRANSMITTING PROCESS
S210
RECEIVING PROCESS
S312
TRANSMITTING PROCESS
S211
MEMORY CONTENTS EXTRACTING PROCESS
S212
STORING PROCESS
A2
C2
S213
S112
RECEIVING PROCESS
TRANSMITTING PROCESS
S313
RECEIVING PROCESS
S113
IMAGE AND VOICE STORING PROCESS
S314
IMAGE AND VOICE STORING PROCESS
S114
IMAGE DISPLAY PROCESS
S315
IMAGE DISPLAY PROCESS
S115
VOICE GENERATING PROCESS
S316
VOICE GENERATING PROCESS
RETURN
RETURN
RETURN

FIG. 13

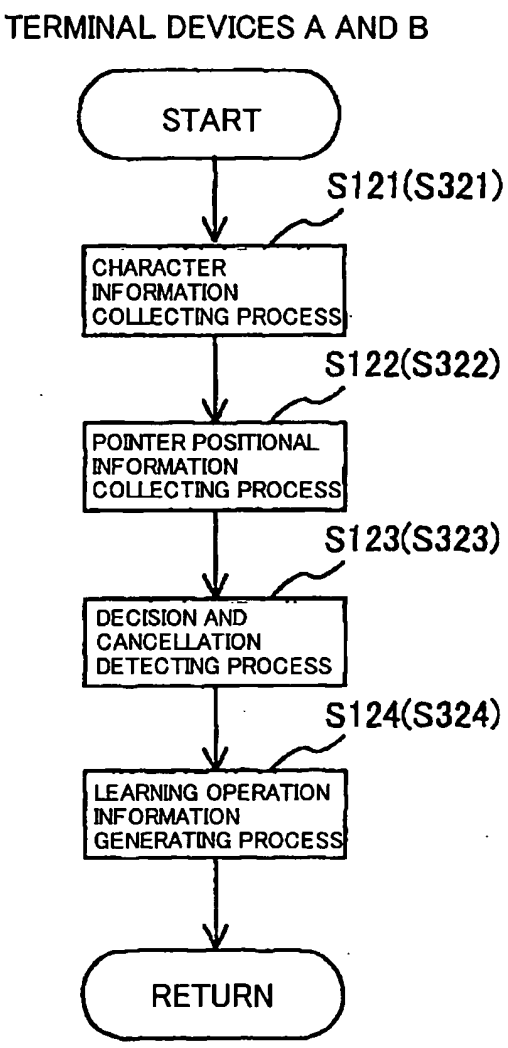

TERMINAL DEVICES A AND B
START
S121(S321)
CHARACTER INFORMATION COLLECTING PROCESS
S122(S322)
POINTER POSITIONAL INFORMATION COLLECTING PROCESS
S123(S323)
DECISION AND CANCELLATION DETECTING PROCESS
S124(S324)
LEARNING OPERATION INFORMATION GENERATING PROCESS
RETURN

FIG. 14

TERMINAL DEVICES A AND B

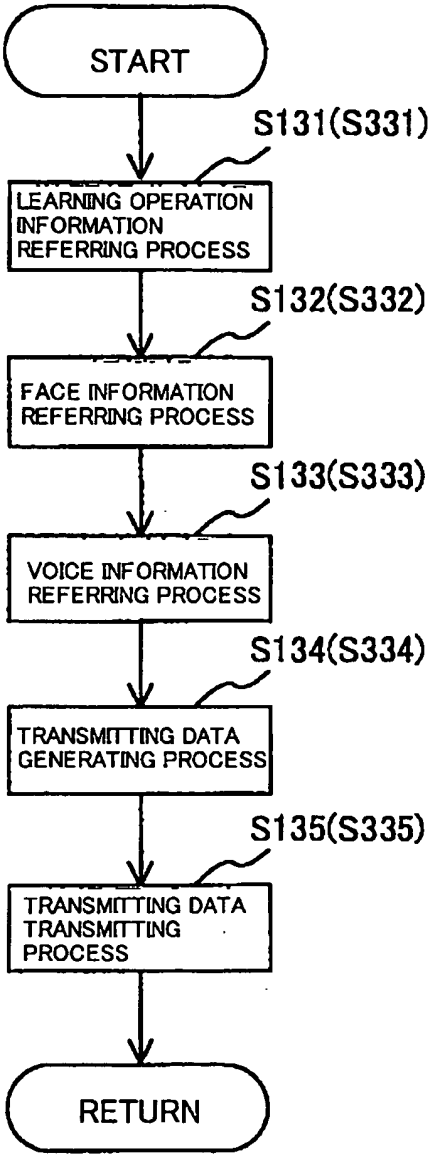


FIG. 15

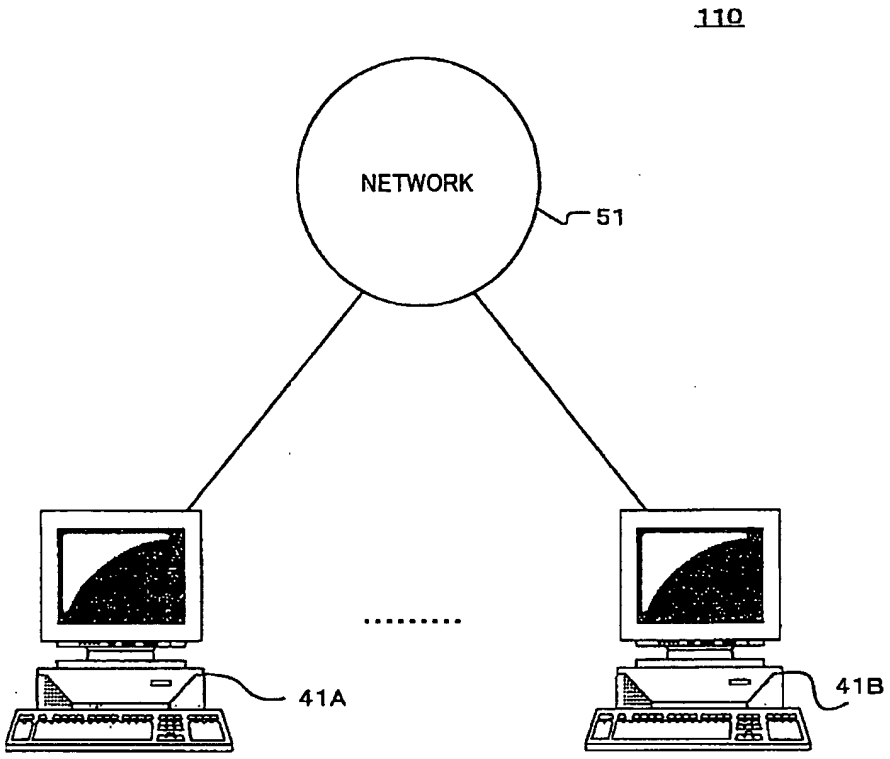


FIG. 16

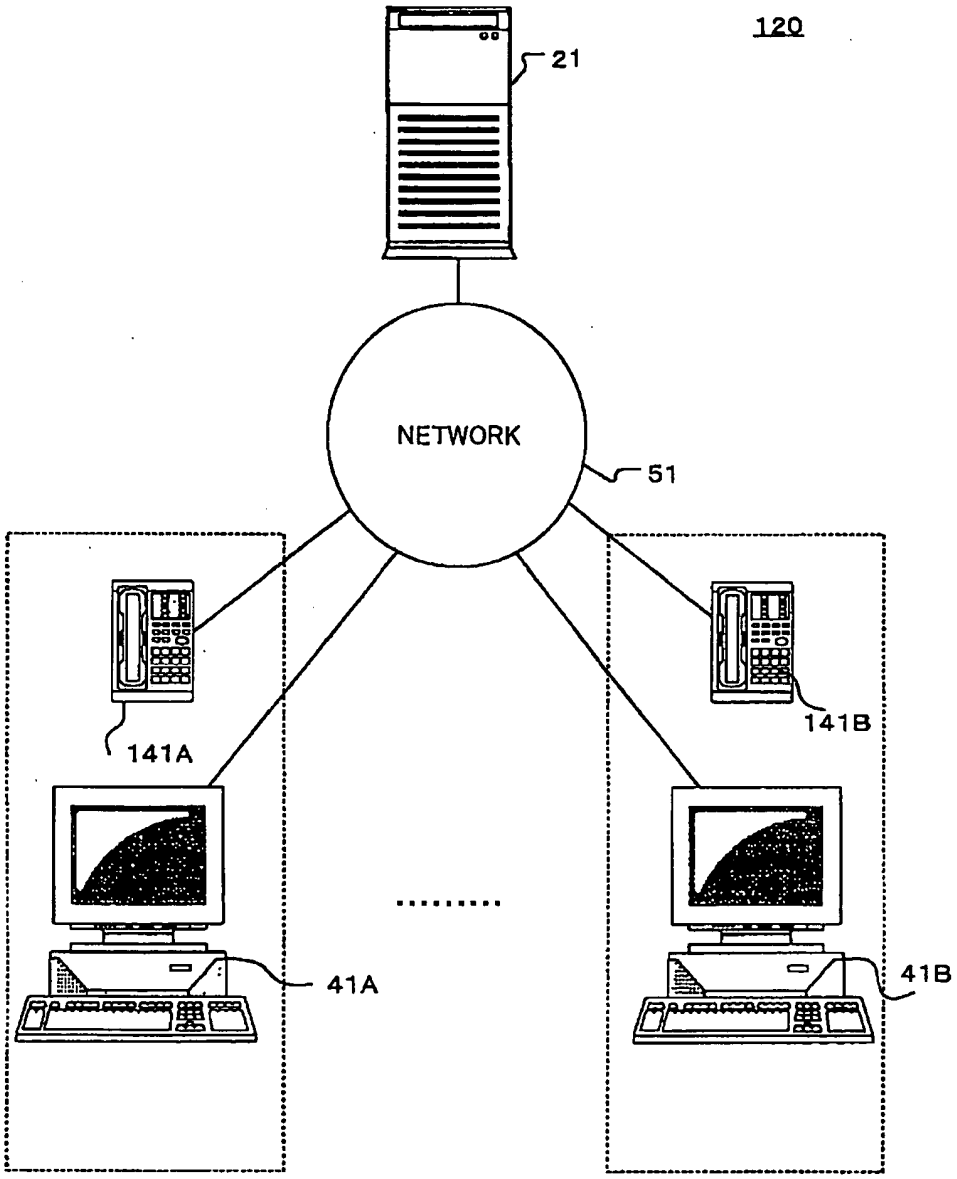


FIG. 17

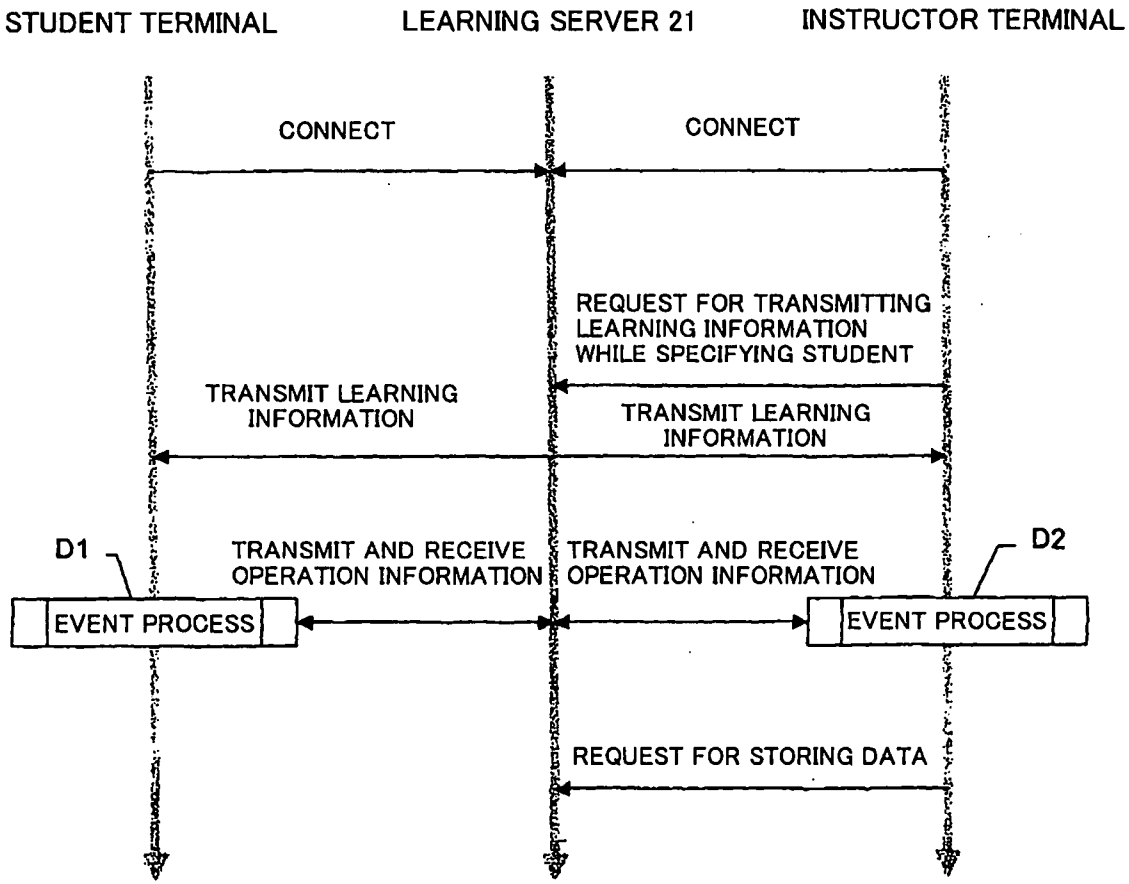

STUDENT TERMINAL
LEARNING SERVER 21
INSTRUCTOR TERMINAL
CONNECT
CONNECT
REQUEST FOR TRANSMITTING LEARNING INFORMATION WHILE SPECIFYING STUDENT
TRANSMIT LEARNING INFORMATION
TRANSMIT LEARNING INFORMATION
D1
TRANSMIT AND RECEIVE OPERATION INFORMATION
TRANSMIT AND RECEIVE OPERATION INFORMATION
D2
EVENT PROCESS
EVENT PROCESS
REQUEST FOR STORING DATA

FIG. 18

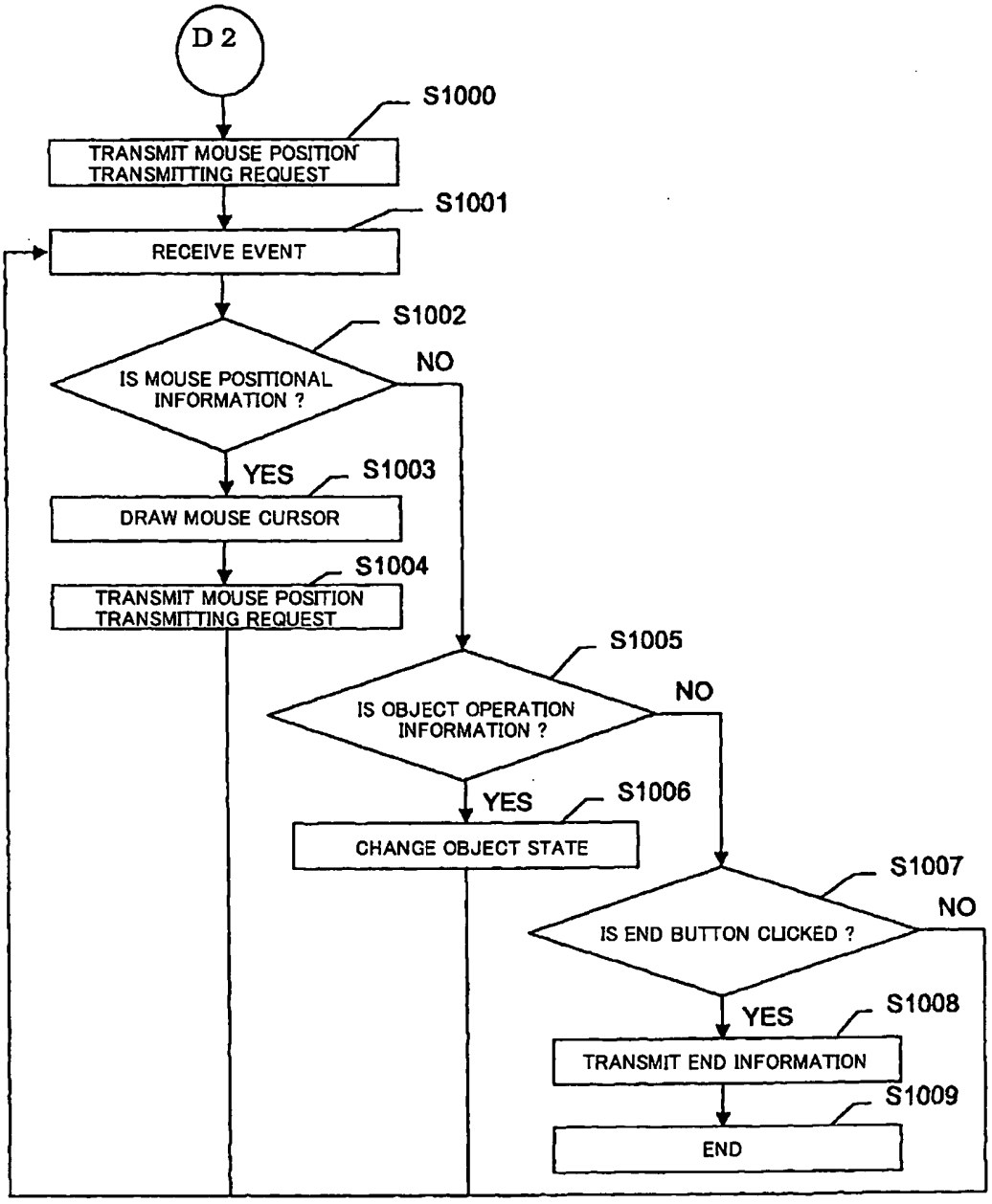

D 2
S1000
TRANSMIT MOUSE POSITION TRANSMITTING REQUEST
S1001
RECEIVE EVENT
S1002
IS MOUSE POSITIONAL INFORMATION ?
NO
YES
S1003
DRAW MOUSE CURSOR
S1004
TRANSMIT MOUSE POSITION TRANSMITTING REQUEST
S1005
IS OBJECT OPERATION INFORMATION ?
NO
YES
S1006
CHANGE OBJECT STATE
S1007
IS END BUTTON CLICKED ?
NO
YES
S1008
TRANSMIT END INFORMATION
S1009
END

FIG. 19

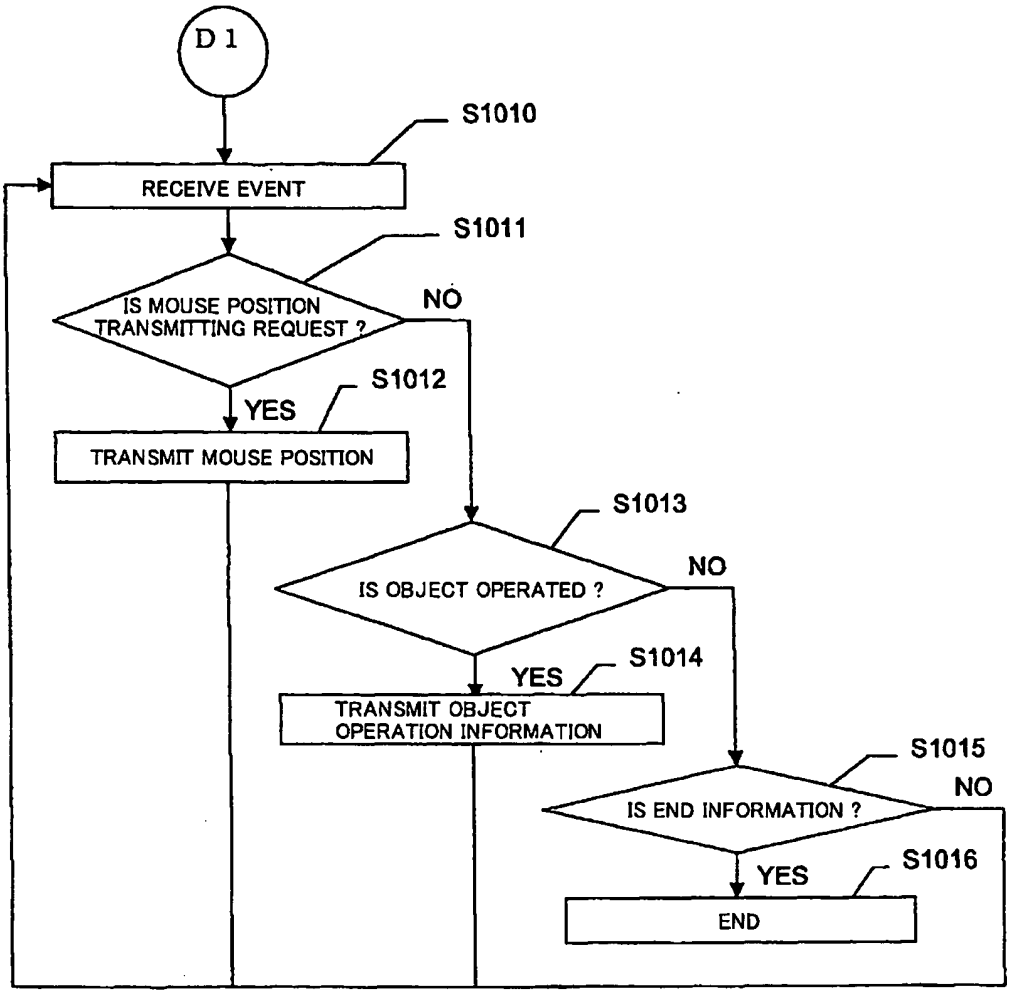

D 1
S1010
RECEIVE EVENT
S1011
IS MOUSE POSITION TRANSMITTING REQUEST ?
NO
YES
S1012
TRANSMIT MOUSE POSITION
S1013
IS OBJECT OPERATED ?
NO
YES
S1014
TRANSMIT OBJECT OPERATION INFORMATION
S1015
IS END INFORMATION ?
NO
YES
S1016
END

FIG. 20

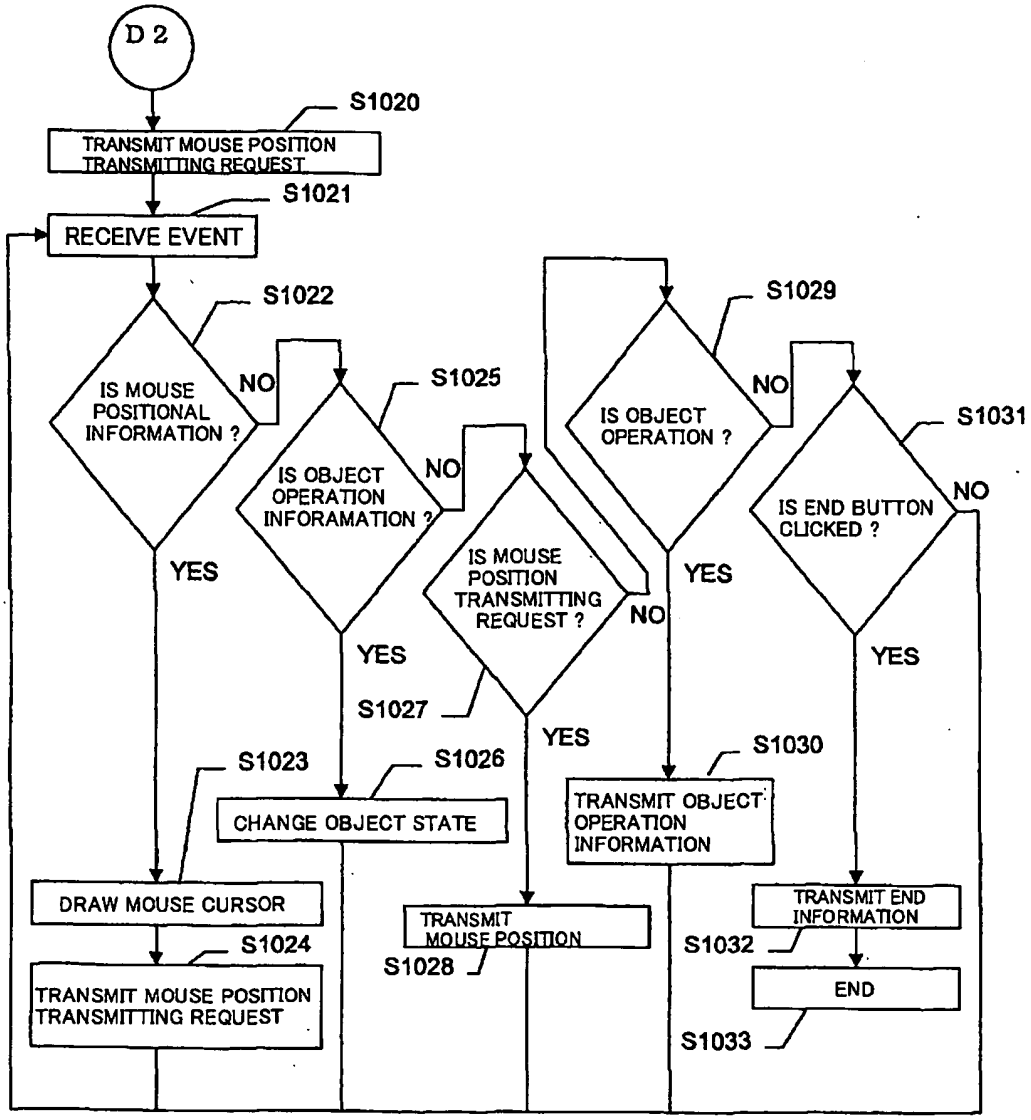

D 2
S1020
TRANSMIT MOUSE POSITION TRANSMITTING REQUEST
S1021
RECEIVE EVENT
S1022
IS MOUSE POSITIONAL INFORMATION ?
NO
YES
S1025
IS OBJECT OPERATION INFORAMATION ?
NO
YES
S1027
IS MOUSE POSITION TRANSMITTING REQUEST ?
NO
YES
S1029
IS OBJECT OPERATION ?
NO
YES
S1031
IS END BUTTON CLICKED ?
NO
YES
S1023
DRAW MOUSE CURSOR
S1024
TRANSMIT MOUSE POSITION TRANSMITTING REQUEST
S1026
CHANGE OBJECT STATE
S1028
TRANSMIT MOUSE POSITION
S1030
TRANSMIT OBJECT OPERATION INFORMATION
S1032
TRANSMIT END INFORMATION
S1033
END

FIG. 21

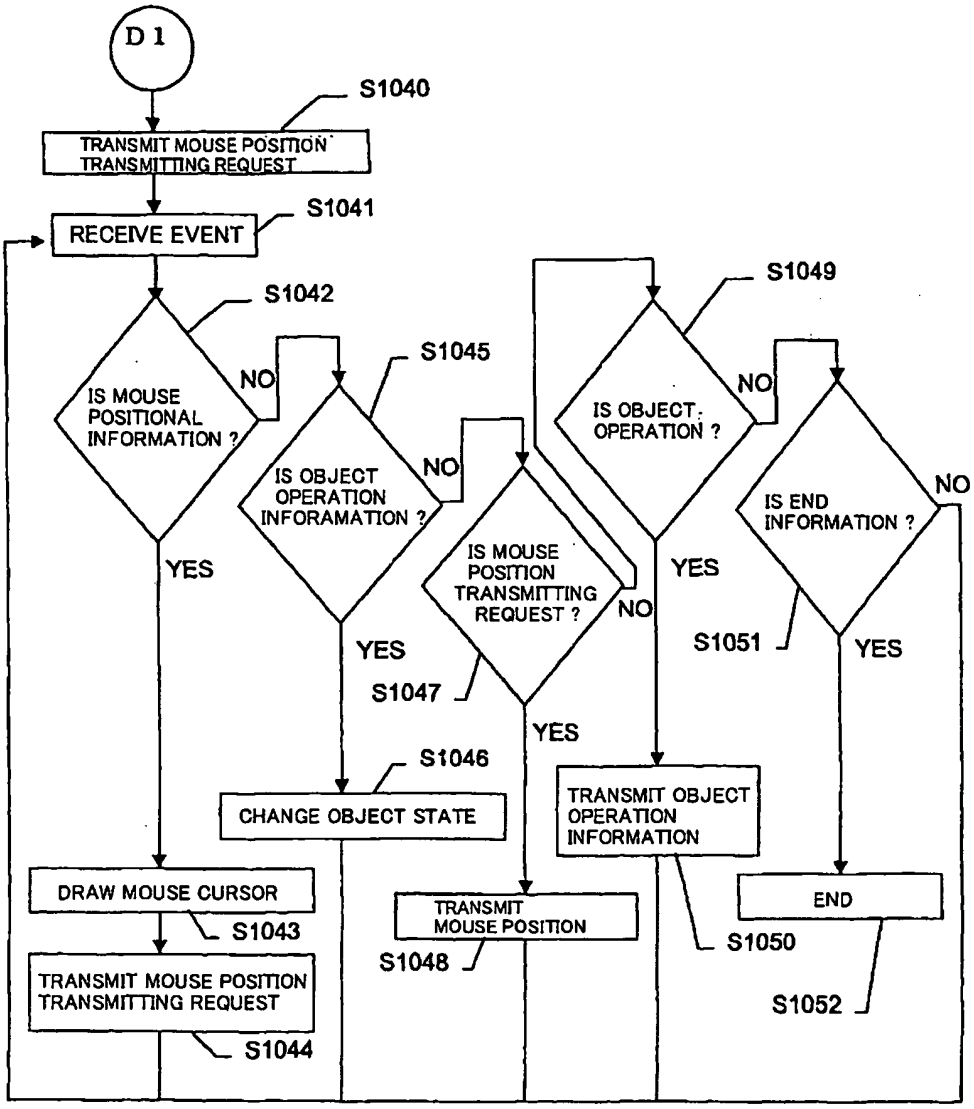

D 1
S1040
TRANSMIT MOUSE POSITION TRANSMITTING REQUEST
S1041
RECEIVE EVENT
S1042
IS MOUSE POSITIONAL INFORMATION ?
NO
YES
S1045
IS OBJECT OPERATION INFORAMATION ?
NO
YES
S1047
IS MOUSE POSITION TRANSMITTING REQUEST ?
NO
YES
S1049
IS OBJECT OPERATION ?
NO
YES
S1051
IS END INFORMATION ?
NO
YES
S1046
CHANGE OBJECT STATE
DRAW MOUSE CURSOR
S1043
TRANSMIT MOUSE POSITION TRANSMITTING REQUEST
S1044
TRANSMIT MOUSE POSITION
S1048
TRANSMIT OBJECT OPERATION INFORMATION
S1050
END
S1052

FIG. 22

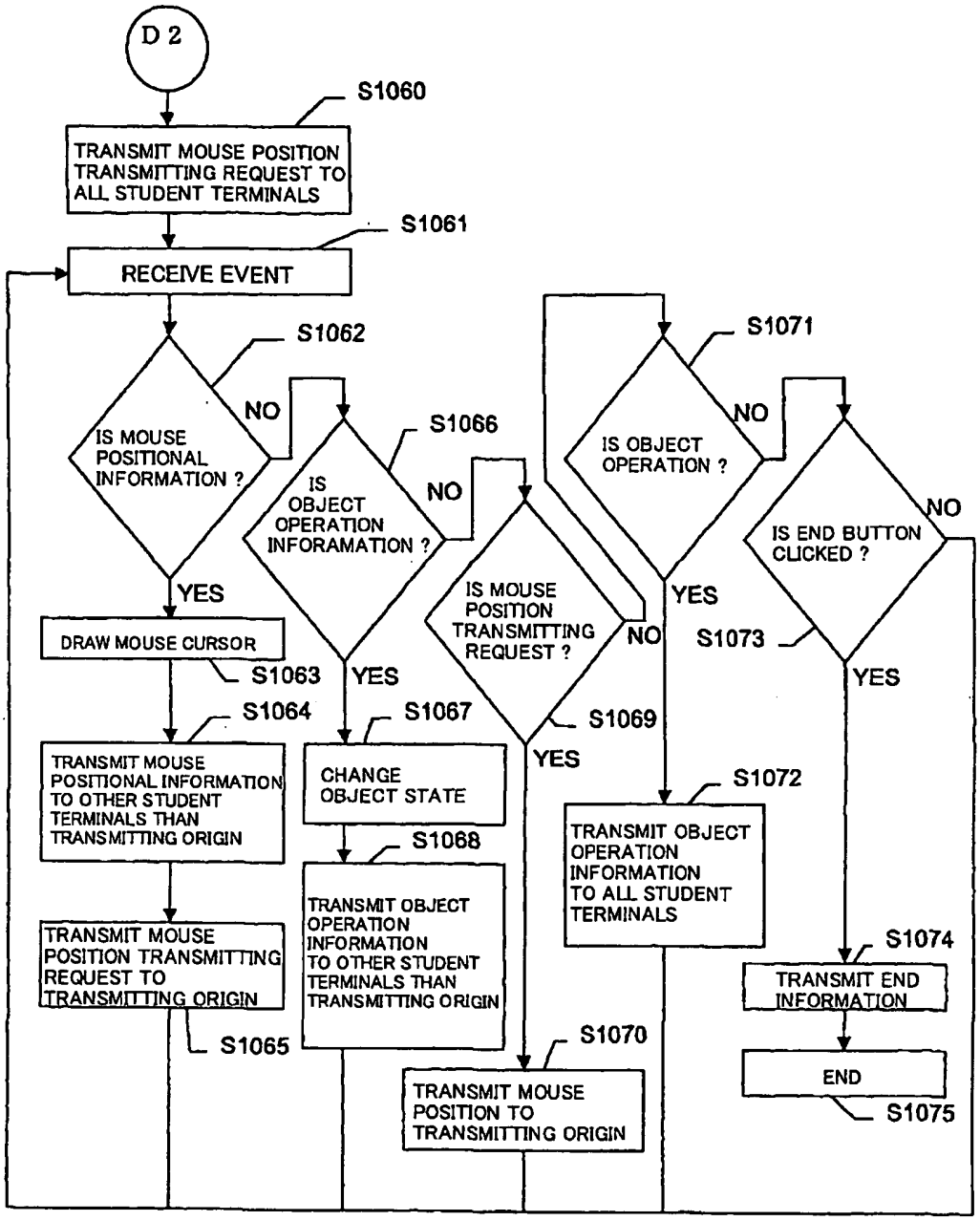
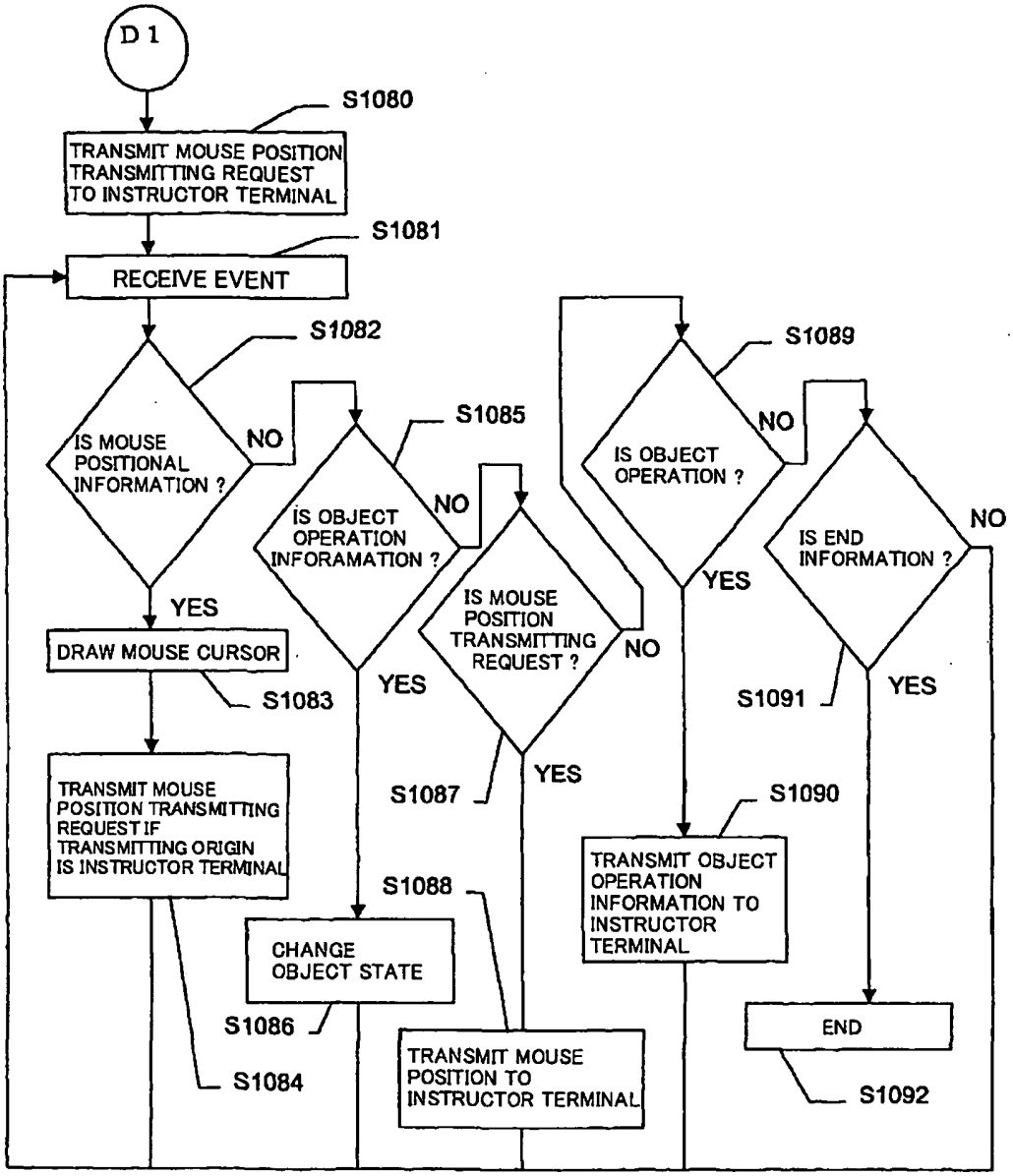

D 2
S1060
TRANSMIT MOUSE POSITION TRANSMITTING REQUEST TO ALL STUDENT TERMINALS
S1061
RECEIVE EVENT
S1062
IS MOUSE POSITIONAL INFORMATION ?
NO
YES
DRAW MOUSE CURSOR
S1063
S1064
TRANSMIT MOUSE POSITIONAL INFORMATION TO OTHER STUDENT TERMINALS THAN TRANSMITTING ORIGIN
TRANSMIT MOUSE POSITION TRANSMITTING REQUEST TO TRANSMITTING ORIGIN
S1065
S1066
IS OBJECT OPERATION INFORAMATION ?
NO
YES
S1067
CHANGE OBJECT STATE
S1068
TRANSMIT OBJECT OPERATION INFORMATION TO OTHER STUDENT TERMINALS THAN TRANSMITTING ORIGIN
S1069
IS MOUSE POSITION TRANSMITTING REQUEST ?
NO
YES
S1070
TRANSMIT MOUSE POSITION TO TRANSMITTING ORIGIN
S1071
IS OBJECT OPERATION ?
NO
YES
S1072
TRANSMIT OBJECT OPERATION INFORMATION TO ALL STUDENT TERMINALS
S1073
IS END BUTTON CLICKED ?
NO
YES
S1074
TRANSMIT END INFORMATION
END
S1075

FIG. 23


D 1
S1080
TRANSMIT MOUSE POSITION TRANSMITTING REQUEST TO INSTRUCTOR TERMINAL
S1081
RECEIVE EVENT
S1082
IS MOUSE POSITIONAL INFORMATION ?
NO
YES
DRAW MOUSE CURSOR
S1083
TRANSMIT MOUSE POSITION TRANSMITTING REQUEST IF TRANSMITTING ORIGIN IS INSTRUCTOR TERMINAL
S1084
S1085
IS OBJECT OPERATION INFORAMATION ?
NO
YES
S1086
CHANGE OBJECT STATE
S1087
IS MOUSE POSITION TRANSMITTING REQUEST ?
NO
YES
S1088
TRANSMIT MOUSE POSITION TO INSTRUCTOR TERMINAL
S1089
IS OBJECT OPERATION ?
NO
YES
S1090
TRANSMIT OBJECT OPERATION INFORMATION TO INSTRUCTOR TERMINAL
S1091
IS END INFORMATION ?
NO
YES
END
S1092